

DATA MANAGEMENT IN FLASH MEMORY

ABSTRACT

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The described technique emulates a disk drive on flash memory, and avoids storing allocation data structure on flash memory. A device driver is provided for a flash memory device, and the device driver maintains a linked list of sector caches. The use of a list of sector caches enables one to minimize erases and thus flash memory life, as well as speed up write operations to the flash memory device. Heuristics are used to detect the sectors that hold critical meta-data information and give preferential treatment to the corresponding cached sectors. The number of sector caches available to the device driver is configured depending on the memory available in the system.

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